

## ABSTRACT

Apparatuses and methods of a ballast water treatment system are disclosed. The ballast water treatment system includes a control system and a ballast tank system. The control system controls the concentration of a biocide in the ballast tank system. In addition, the ballast water treatment system can be implemented in a vessel. The ballast water treatment system includes a control system, a biocide generation system, and a ballast tank system. The control system is capable of controlling the concentration of a biocide in the ballast tank system by controlling the amount of the biocide feed into the ballast tank system from the biocide generation system. Further, the ballast water treatment system involves methods for controlling organisms in ballast water of a vessel. A representative method includes providing the ballast water, and treating the ballast water with chlorine dioxide.